## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No. 7,269,139

Confirmation No. 7079

Issued: September 11, 2007

Name of Patentee: Williams, Jr. et. al.

Patent Title: METHOD AND APPARATUS
FOR AN ADAPTIVE RATE CONTROL
MECHANISM REACTIVE TO FLOW
CONTROL MESSAGES IN A PACKET
SWITCHING SYSTEM

### REQUEST FOR CERTIFICATE OF CORRECTION OF
### PATENT FOR PATENT OFFICE MISTAKE (37 C.F.R. § 1.322)

Attn: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

It is requested that a Certificate of Correction be issued to correct Office mistakes found the above-identified patent. Attached hereto is a Certificate of Correction which indicates the requested correction. For your convenience, also attached are copies of selected pages (a) from the issued patent with errors highlighted, and (b) from Amendment D filed February 5, 2007, with the correct text/instructions.

It is believed that there is no charge for this request because applicant or applicants were not responsible for such error, as will be apparent upon a comparison of the issued patent with
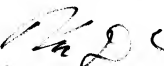
In re US Patent No. 7,269,139

the application as filed or amended. However, the Assistant Commissioner is hereby authorized
to charge any fee that may be required to Deposit Account No. 501430.

Respectfully submitted,
**The Law Office of Kirk D. Williams**

Date: _10/30/2009_    By _____

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# UNITED STATES PATENT AND TRADEMARK OFFICE

## CERTIFICATE OF CORRECTION

PATENT NO. : 7,269,139
APPLICATION NO. : 09/894,199
DATED : Sept. 11, 2007
INVENTOR(S) : Williams, Jr. et al

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 8, line 52, replace "rate it said" with – rate if said –

Col. 9, line 9, replace "employing" with – embodying –

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5. The method of claim 2, further comprising generating a set of tokens based on the value of the current rate.

6. The method of claim 1, wherein the quantitative time duration corresponds to an amount of time from said receipt of the start flow control signal until said receipt of the stop flow control signal.

7. A method for adaptively control rates, the method comprising:

receiving a start flow control signal;

receiving a stop flow control signal;

determining a time difference between the receipt of the start flow control signal and the stop flow control signal; and

exponentially decreasing an initial rate for sending information if the time difference is greater than a predetermined threshold.

8. The method of claim 7, further comprising multiplicatively increasing the initial rate if the time difference is less than a predetermined threshold.

9. The method of claim 8, wherein said multiplicatively increasing the initial rate includes doubling the initial rate.

10. The method of claim 7, wherein said exponentially decreasing the initial rate includes raising the initial rate to a one-half power.

11. The method of claim 7, further comprising multiplicatively increasing a current traffic rate.

12. The method of claim 7, wherein the time difference is a measured time duration.

13. The method of claim 7, wherein the time difference is determined based on said receipt of the start flow control signal followed in time by said receipt of the stop flow control signal.

14. An apparatus configured to adaptively control rates, the apparatus comprising:

a rate controller; and

a timing mechanism;

wherein the rate controller is configured to receive a start flow control signal and a stop flow control signal, to determine a quantitative time duration between said receipt of the start flow control signal and said receipt of the stop flow control signal, to compare said quantitative time duration to a predetermined threshold to produce a comparison result, and to determine an initial rate for sending information based at least in part on said quantitative time duration and the comparison result.

15. The apparatus of claim 14, wherein the rate controller is configured to set a current rate to the initial rate, and to increase the current rate.

16. The apparatus of claim 15, wherein said increasing of the current rate includes doubling a value of the current rate.

17. The apparatus of claim 16, wherein the rate controller is configured to compare the current rate to a maximum rate, and is configured to set the current rate to the maximum rate.

18. The apparatus of claim 15, wherein the rate controller is configured to generate a set of tokens based on the value of the current rate.

19. The apparatus of claim 14, wherein the quantitative time duration corresponds to an amount of time from said receipt of the start flow control signal until said receipt of the stop flow control signal.

20. An apparatus configured to adaptively control rates, the apparatus comprising:

means for receiving a start flow control and a stop flow control signal;

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means for determining a quantitative time duration between the start flow control signal and the stop flow control signal;

means for determining an initial rate for sending information based at least in part on said quantitative time duration;

means for comparing the quantitative time duration to a predetermined threshold to produce a comparison result; and

means for adjusting the initial rate based at least in part on the comparison result.

21. The apparatus of claim 20, wherein said means for adjusting the initial rate includes means for increasing the initial rate if said quantitative time duration was less than the predetermined threshold.

22. The apparatus of claim 20, wherein said means for adjusting the initial rate includes means for decreasing the initial rate if said quantitative time duration was greater than the predetermined threshold.

23. The apparatus of claim 20, comprising means for setting a current rate to the initial rate; and means for increasing the current rate.

24. The apparatus of claim 23, wherein said means for increasing the current rate includes means for doubling a value of the current rate.

25. The apparatus of claim 24, comprising means for comparing the current rate to a maximum rate, and means for setting the current rate to the maximum rate.

26. The apparatus of claim 23, comprising means for generating a set of tokens based on the value of the current rate.

27. The apparatus of claim 20, wherein the quantitative time duration corresponds to an amount of time from said receipt of the start flow control signal until said receipt of the stop flow control signal.

28. One or more computer-readable media tangibly embodying computer-executable instructions for performing operations for adaptively control rates, said operations comprising:

identifying a quantitative time duration between a start flow control signal and a stop flow control signal;

determining an initial rate for sending information based at least in part on said quantitative time duration;

comparing the quantitative time duration to a predetermined threshold to produce a comparison result; and

adjusting the initial rate based at least in part on the comparison result.

29. The computer-readable media of claim 28, wherein said adjusting the initial rate includes increasing the initial rate it said quantitative time duration was less than the predetermined threshold.

30. The computer-readable media of claim 28, wherein said adjusting the initial rate includes decreasing the initial rate if said quantitative time duration was greater than the predetermined threshold.

31. The computer-readable media of claim 28, wherein said operations further comprise: setting a current rate to the initial rate; and increasing the current rate.

32. The computer-readable media of claim 31, wherein said increasing the current rate includes doubling a value of the current rate.

33. The computer-readable media of claim 32, wherein said operations further comprise: comparing the current rate to a maximum rate, and setting the current rate to the maximum rate.

**34**. The computer-readable media of claim **31**, wherein said operations further comprise generating a set of tokens based on the value of the current rate.

**35**. The computer-readable media of claim **28**, wherein the quantitative time duration corresponds to an amount of time from said receipt of the start flow control signal until said receipt of the stop flow control signal.

**36**. One or more computer-readable media tangibly embodying computer-executable instructions for performing operations for adaptively control rates, said operations comprising:

    identifying a time difference between a start flow control signal and a stop flow control signal; and

    exponentially decreasing an initial rate for sending information if the time difference is greater than a predetermined threshold.

**37**. The computer-readable media of claim **36**, wherein said operations further comprise multiplicatively increasing the initial rate if the time difference is less than a predetermined threshold.

**38**. The computer-readable media of claim **37**, wherein said multiplicatively increasing the initial rate includes doubling the initial rate.

**39**. The computer-readable media of claim **36**, wherein said exponentially decreasing the initial rate includes raising the initial rate to a one-half power.

**40**. The computer-readable media of claim **36**, wherein said operations further comprise multiplicatively increasing a current traffic rate.

**41**. The computer-readable media of claim **36**, wherein the time difference is a measured time duration.

**42**. A method for adaptively control rates, the method comprising:

    determining a timing difference between a start flow control signal and a stop flow control signal;

    determining an initial rate for sending information based at least in part on the determined timing difference; and

    adjusting the initial rate based at least in part on the result of comparing the timing difference to a predetermined threshold.

**43**. The method of claim **42**, wherein said adjusting the initial rate includes increasing the initial rate if the timing difference was less than the predetermined threshold.

**44**. The method of claim **42**, wherein said adjusting the initial rate includes decreasing the initial rate if the timing difference was greater than the predetermined threshold.

**45**. An apparatus configured to adaptively control rates, the apparatus comprising:

    a rate controller; and

    a timing mechanism;

    wherein the rate controller is configured to determine a timing difference between a start flow control signal and a stop flow control signal to determine an initial rate for sending information based at least in part on the determined timing difference, and to adjust the initial rate based at least in part on a comparison of the timing difference to a predetermined threshold.

**46**. The apparatus of claim **45**, wherein said adjusting the initial rate includes increasing the initial rate if the timing difference was less than the predetermined threshold.

**47**. The apparatus of claim **45**, wherein said adjusting the initial rate includes decreasing the initial rate if the timing difference was greater than the predetermined threshold.

\* \* \* \* \*

In re WILLIAMS ET AL., Application No. 09/894,199
Amendment D

Claim 30 (original): The apparatus of claim 26, comprising means for setting a current rate to the initial rate; and means for increasing the current rate.

Claim 31 (previously presented): The apparatus of claim 30, wherein said means for increasing the current rate includes means for doubling a value of the current rate.

Claim 32 (original): The apparatus of claim 31, comprising means for comparing the current rate to a maximum rate, and means for setting the current rate to the maximum rate.

Claim 33 (original): The apparatus of claim 30, comprising means for generating a set of tokens based on the value of the current rate.

Claim 34 (currently amended): One or more computer-readable media tangibly embodying computer-executable instructions for performing operations, said operations comprising:
identifying a quantitative time duration between a start flow control signal and a stop flow control signal; and
determining an initial rate for sending information based at least in part on said quantitative time duration;
comparing the timing difference to a predetermined threshold to produce a comparison result; and
adjusting the initial rate based at least in part on the comparison result..

Claim 35 (canceled)

Claim 36 (currently amended): The computer-readable media of claim 35 claim 34, wherein said adjusting the initial rate includes increasing the initial rate if said quantitative time duration was less than the predetermined threshold.

① See Col.8 line 52

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In re WILLIAMS ET AL., Application No. 09/894,199
Amendment D

Claim 37 (currently amended): The computer-readable media of ~~claim 35~~ claim 34, wherein said adjusting the initial rate includes decreasing the initial rate if said quantitative time duration was greater than the predetermined threshold.

Claim 38 (previously presented): The computer-readable media of claim 34, wherein said operations further comprise: setting a current rate to the initial rate; and increasing the current rate.

Claim 39 (previously presented): The computer-readable media of claim 38, wherein said increasing the current rate includes doubling a value of the current rate.

Claim 40 (previously presented): The computer-readable media of claim 39, wherein said operations further comprise: comparing the current rate to a maximum rate, and setting the current rate to the maximum rate.

Claim 41 (previously presented): The computer-readable media of claim 38, wherein said operations further comprise generating a set of tokens based on the value of the current rate.

Claim 42 (currently amended): One or more computer-readable media tangibly embodying computer-executable instructions for performing operations, said operations comprising:

②

→ See Col. 9
Line 9

    identifying a ~~timing~~ time difference between a start flow control signal and a stop flow control signal; and

    exponentially decreasing an initial rate if the time difference is greater ~~than the~~ than a predetermined threshold.

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